

# Gallstones and Cholecystectomy Information Sheet



# Gallstones & Cholecystectomy

This information sheet describes what they are, the treatment options, and what to expect following a operation.

**The following information will hopefully answer a number of common questions that many patients have about their gallstones and about possible treatment options for them.**

## What are Gallstones?

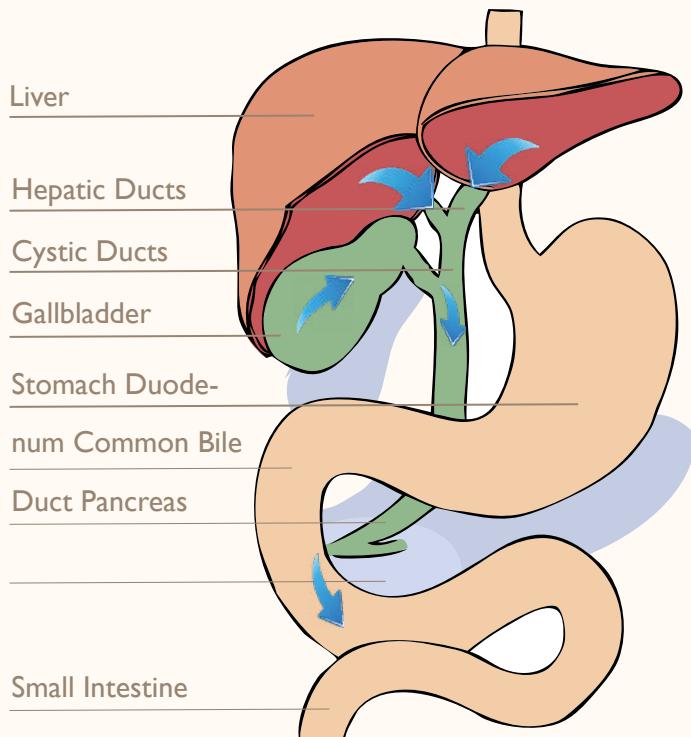
They are stones that form in the gall bladder. The gall bladder is on the right side of the upper abdomen, just beneath the liver and the ribs. It stores and concentrates the bile, which is produced by the liver. The presence of food in the stomach and the duodenum makes the gall bladder release bile into the intestine via a channel called the bile duct to aid digestion. Gallstones may be present and cause no symptoms. However, very severe pain can be caused when the gall bladder is made to contract. This is usually caused by fatty foods. Lesser degrees of bloating, wind and indigestion may result from gall bladder disease.

If, when the gall bladder contracts, stones pass from the gall bladder into the bile ducts, they may obstruct the flow of bile.

This may produce jaundice (jaundice means 'yellow'), which is characterized by a yellow tint of your eyes and skin, this occurs because the yellow pigment in the bile cannot leave the liver and overflows into the blood stream.

This pigment is also responsible for the normal brown colour of your bowel motions, but when bile does not reach the intestine because of stone obstruction, the bowel motions become pale.

The urine also becomes dark, as the bile pigments produced by the liver overflow into the urine. When jaundice has been present for a long period of time, itching of the skin occurs due to build up of bile salts in the skin.



### How do they occur?

Several factors have been identified. First, bile contains a chemical known as cholesterol. If the amount of cholesterol in the bile increases, then cholesterol stones may form. Secondly, when the gall bladder does not empty properly, bile becomes stagnant, infection is more likely and as a result of infection, small amounts of debris may be formed. Calcium, phosphate, bile pigment and cholesterol are found within this debris and over a period of time the debris builds up to form gallstones.

### Why do they occur?

Gallstones may occur any age. They are present in about one in five of the population over the age of 40. In pregnancy, the hormonal changes result in incomplete emptying of the gall bladder therefore stagnation and stone formation is more likely. With certain disease or operations of the small bowel, cholesterol stones may form. In some blood disorders where red cells are destroyed, more bile pigment is produced and this may also result in gallstones. There can often be a family history of gallstones. However, the main reason for a high incidence of gallstones in the UK is the high fat content of the typical diet.

### What does the treatment/management involve?

Most gallstones require no treatment. Should the gallstones cause symptoms then they are normally treated by an operation. Other approaches have been tried in the past but are much less effective. If gallstones do not contain calcium, bile salts may be administered to help them dissolve. However, this is a prolonged course of treatment (1-2 years), this treatment has side effects including skin rashes and diarrhoea and when the treatment is stopped, the gallstones will come back.

Patients who are elderly or unfit for surgery and who have jaundice may have the gallstones removed from the bile duct without removing the gall bladder. This is done by passing a flexible telescope (endoscopy) through the mouth into part of the intestine called the duodenum, this allows access to the lower end of the bile ducts.

This method is occasionally used in patients to improve their general condition and make them fitter for surgery at a later stage. It cannot be used for stones within the gallbladder however.

Surgery will involve removal of the gall bladder. This is known as a Cholecystectomy and is the treatment of choice for most patients. The gall bladder can be removed by 'keyhole surgery' or by open surgery, but the vast majority of gall bladders are removed by 'key-hole surgery'. This is often referred to as a Laparoscopic Cholecystectomy. Very occasionally, if your surgeon anticipates difficulties he may advise you to have an open operation.

### What would happen if your gallstones are not dealt with?

Most people with gallstones have no symptoms. We would not usually advise an operation if you have no symptoms or have had no complications as a result of gallstones. However, untreated gallstones may continue to cause bouts of severe pain.

Gallstones increase the likelihood of inflammation of the gall bladder (cholecystitis). Very rarely, an abscess can develop within the gall bladder (empyema) or the gallbladder may burst (perforate). If gallstones get stuck in the bile duct system they may stop the flow of bile from the liver to produce jaundice.

Gallstones in the bile ducts may also rarely cause inflammation of the pancreas (pancreatitis). These are serious complications and once they have occurred we would advise cholecystectomy to prevent further attacks.

### Laparoscopic Cholecystectomy

You will be asked to attend the pre-admission assessment clinic 1-2 weeks prior to your admission to ensure you are fit for surgery, allowing time for the necessary pre-operative tests, which may include, blood tests, cardiogram (ECG) and a chest x-ray.

You will be admitted on the day of surgery unless there are any medical or technical reasons, which may require you to be admitted the day before the operation. On admission you will be asked to wear TED elasticated stockings and you will be given heparin injections to thin the blood to reduce the risk of thrombosis.

The operation is carried out under a general anaesthetic. A telescope the width of a small finger is placed into the abdomen through a small cut at the navel. In order to create space around the organs within the abdomen and provide the surgeon with a clear view it is necessary to introduce carbon dioxide (air) to 'blow up' the abdomen. Special instruments are passed through three other separate 5-11mm incisions in the abdomen; these enable the surgeon to retract and manipulate the structures within the abdomen and remove the gall bladder.

This is all visualized on a video screen by a miniature camera inserted through one of the 4 'keyhole' incisions. An x-ray (cholangiogram) will usually be performed during the course of the operation to ensure that gallstones have not escaped into the bile ducts: if there is evidence of gallstones within the bile duct they will be removed as well.

It may not be possible to access the gall bladder adequately by use of a keyhole incision. It is important to understand that if any difficulties are encountered during keyhole surgery it is in your best interest that your surgeon is free to proceed with an open operation for maximum safety.

### What are the risks/complications of surgery?

- Wound infection.
- Bleeding after the operation.
- The procedure will usually be attempted through a Laparoscopic (keyhole) technique. However, occasionally in 1 to 1000 it is not possible to complete the operation using the keyhole technique and a larger incision (an open procedure) may be made. This would entail a longer period of postoperative convalescence.
- In around 1 in 100 patients, bile may collect in the area where the gall bladder has been removed. This will often necessitate a longer stay in hospital (or coming back into hospital) and the insertion of a small drain through the skin in this area.
- Occasionally a small stone may have left the gall bladder and moved into the main bile duct. Sometimes these stones can be removed during the same operation but occasionally a further procedure is required after surgery called an ERCP. This is usually required in about 1 in 100 cases.
- There is a very small risk (less than 1 in a 1000) of damage to the main (common) bile duct during this procedure. Should this occur further surgical intervention would be necessary.
- Removal of the gall bladder and gallstones is primarily an operation to relieve pain from gallstones and to prevent complications of gallstones such as pancreatitis and cholecystitis (infection of the gall bladder). The operation is unlikely to affect any symptoms that you may have of indigestion, nausea and acid reflux.

These risks/complications will be explained and discussed with you when the surgeon asks you to sign the consent form for the operation.

### What should you expect after surgery?

After your operation you may have a drip in your arm giving you fluids initially. However, you will commence fluids as soon as able, if tolerating fluids your drip will be discontinued and you will progress to a light diet.

Abdominal pain/discomfort is to be expected after the operation therefore pain relief consisting of injections or tablets may be required for the first 24-48 hours.

Some patients following 'keyhole' surgery may experience shoulder tip pain for a couple of days: this is caused by the abdomen being stretched by carbon dioxide (air), which used to inflate the abdomen at the time of surgery.

If you are feeling sick after your operation, please tell the nurse looking after you, as they can give you an injection to alleviate this.

A tube (drain) may have been inserted, separate from the scar, into the abdomen to prevent the accumulation of blood or bile following surgery; this will be removed after 24-48 hours and the site covered with a dry dressing.

With 'keyhole' surgery the small incisions will be closed with skin glue: this should remain in place for 2-3 weeks and then peel off on its own. Because the skin glue is waterproof you may take a bath or shower the day after surgery.

With 'open' surgery if dissolvable stitches are not used then you will need to have your stitches removed 10 days after the operation, you will be informed of the arrangements made for there removal before you are discharged.

The main advantage of 'keyhole surgery' is that the period of recovery is far shorter than for an 'open' cholecystectomy: the average length of hospital stay is approximately 14 hours. You will require about 2 weeks off work. For an 'open' operation the length of hospital stay is approximately 3 days and the average length of time off work is 4 weeks.

Although it must be remembered it may take longer for some individuals to make a full recovery. If you require a sick certificate for work please ask a member of staff before discharge.

You can resume sexual relations as soon as this feels comfortable.

It is advisable not to drive for at least 1 week; some people feel they need a little longer. Usually if you can get in and out of the bath without any discomfort and/or assistance you should be safe to drive. However, please check with your Insurance Company as policies vary with individual companies. Some swelling or bruising at the wound site(s) is not unusual and there will be some discomfort and tenderness where the incision(s) have been made. In the period following your operation you should seek medical advice if you notice any of the following problems:

- Increased pain, redness, swelling or discharge of wound(s)
- Persistent bleeding from the wound(s)
- Difficulty in passing urine
- High temperature
- Nausea or vomiting

The small white dissolvable suture used to close the skin can be extruded from the wound: this can happen several weeks afterward and is nothing to worry about.

### Useful contacts for further information

#### **NHSDirect 0845 4647**

Web address: [www.patient.co.uk](http://www.patient.co.uk)

Web address: [www.nhsdirect.nhs.uk](http://www.nhsdirect.nhs.uk)

#### **Mr. M P N Lewis, Upper GI Consultant Surgeon**

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